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International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 17/60, 17/10, 17/16	A1	(11) International Publication Number: WO 98/13776 (43) International Publication Date: 2 April 1998 (02.04.98)
(21) International Application Number: PCT/US97/16446 (22) International Filing Date: 16 September 1997 (16.09.97) (30) Priority Data: 08/717,821 24 September 1996 (24.09.96) US (71) Applicant (for all designated States except US): RCO SOFTWARE LIMITED (GB/GB); Avenue House, St. Julian's Avenue (GB). (71)(72) Applicant and Inventor (for BB US only): MASCH, Vladimir, A. [/US]; 94 Old Smalley Town Road, Earren, NJ 07059 (US). (74) Agent: OSTROFF, Irwin; Ostroff & Associates, 3 Lackawanna Boulevard, Murray Hill, NJ 07974 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: **COMPUTER AIDED RISK MANAGEMENT IN MULTIPLE-PARAMETER PHYSICAL SYSTEMS**

(57) Abstract

A computer method manages risk in multiple-parameter physical systems performing interrelated activities, where at least one of such activities is risk-related in that it may have an outcome level which may fall outside of boundary limits. The method establishes a course of action for the physical systems that facilitates preventing any outcome levels for risk-related activities from falling outside of boundary limits (25). The method assumes the existence of a computational multiscenario decision-making model (17) that describes the physical systems and determines, under some set of criteria, both feasible and desirable levels of their activities. The method finds a set of satisfiable boundary limits in computer memory (45), develops in computer memory a multitude of candidate strategies (75) that satisfy these limits, describes the strategies in computer memory in formats of multidimensional outcome and regret matrices and jointly applies to such matrices multiple optimization criteria.

